

REMARKS/ARGUMENTS**Specification**

In the specification, paragraphs [0006], [0010] and [0043] have been amended to correct typographical errors per the Examiner's suggestion. No new matter has been added with these amendments.

Claims

In this application, claims 9-19 and 38 are pending and rejected. In view of the Examiner's earlier restriction requirement, the Applicant retains the right to present claims 1-8 and 20-37 in a divisional application at a later date. By this Response, claims 11, 13-15, 17 and 19 are canceled and claims 9, 10, 12, 16, 18 and 38 are amended. Claims 39-42 are newly added.

Claim Objections

Claims 9 and 38 were objected for containing informalities and correction was required. Claims 9 and 38 have been amended to correct the informalities. No new matter has been added with these amendments.

35 U.S.C. §112

Claims 12, 14, 15, 17 and 19 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claims 14, 15, 17 and 19 have been canceled.

Claim 12 depends from claim 9, which has been amended to recite that "each parabolic hole has a shape substantially in the form of $y=Ax^2$ and is formed about a central axis." As stated in the specification, the terms parabola and paraboloid are intended to be used interchangeably. *See* Page 11, lines 1-3. A paraboloid is a surface having parabolic sections parallel to a single coordinate axis and elliptic sections perpendicular to that axis. American Heritage® Dictionary of the English Language, Fourth Edition 2000. The

Applicants, for the sake of convenience, have chosen to claim a parabolic hole in the reflector rather than the surface defining the parabolic hole. However, claim 9 specifically recites the equation defining the shape of the hole, i.e., the shape of the surface defining the parabolic holes, as $y=Ax^2$, as well as the central (coordinate) axis about which the parabolic hole is formed. Furthermore, while the variable "A" may have both a positive and a negative range, the Applicant has clearly recited a positive structural limitation by claiming a "hole" in the shape of a parabola in the reflector rather than a protrusion or appendage. Finally, the variable A is merely a scaling factor when defining the shape of the parabolic hole. To recite a particular numerical value would unnecessarily limit the scope of the claim to a light source structure having a parabolic hole of a particular size. For at least these reasons, claim 12, as well as amended claim 9, meets the standards of 35 U.S.C. §112, second paragraph. Reconsideration and withdrawal of the rejection is respectfully requested.

35 U.S.C. §102

Claims 9-15 and 38 were rejected under 35 U.S.C. §102(b) as being anticipated by Kamada et al. (U.S. Publication 2002/0006040). Claims 11-13 have been canceled and claim 9 has been amended.

The Applicants respectfully submit that claim 9, as amended, is not anticipated by Kamada. Independent claim 9 includes, among others, a feature that the "first and second parabolic holes are arranged so that the central axes intersect." In contrast, Kamada teaches that the dents 11 are arranged in a planar configuration wherein the central axis of each of the dents 11 do not intersect with each other. For example, see Figure 1, which shows that the central axes of the dents 11 are parallel to one another. Those axes which do intersect, as noted by the Examiner in the Office Action, are not *central* axes. Even if each of the dents 11 of Figure 1 were replaced with the paraboloid 10b as shown in Figure 13, the central axes of each of the paraboloids 10b still would not intersect.

In fact, Kamada teaches away from the present invention by arranging multiple LED chips 1 within each paraboloid 10b so that the light from the LED chips 1 within a single paraboloid 10b intersect with one another. *See* Figure 13. In contrast, the claimed invention

provides that the central axes of the first and second parabolic holes intersect. For at least this reason, the Applicants respectfully request that the rejection of Claim 9 and dependent claims 10, 12 and 38 be reconsidered and withdrawn.

35 U.S.C. §103

Claims 16-19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kamada. Claims 17 and 19 have been canceled.

The Applicants respectfully submit that remaining claims 16 and 18 are patentable over Kamada. Each of claims 16 and 18 is ultimately dependent on claim 9, and Applicants respectfully submit that claim 9 is not obvious in light of Kamada. As discussed above, Kamada is missing the feature of the “first and second parabolic holes are arranged so that the central axes intersect.” Furthermore, Kamada does not provide any motivation to modify the devices disclosed therein to achieve the claimed invention. In fact, Kamada teaches away from the claimed invention by teaching placing multiple LED chips 1 within each paraboloid 10b, with the LED chips 1 angled on non-central axes within the paraboloid 10b to intersect with one another. Claim 9 is therefore not obvious over Kamada. For at least this reason, the Applicants respectfully request that the rejection of claims 16 and 18 be reconsidered and withdrawn.

Newly Added Claims

Claims 39-42 are newly added in this application. No new matter has been added by these claims and support for these claims is found throughout the specification. For example, new claim 39 includes the feature that the lighting source structure of claim 9 further comprises “a first filter for the first light source and a second filter for the second light source.” Support for this claim is found in the specification at page 13, line 15 – page 14, line 3. New claim 40 includes the feature that the “central axes of the parabolic holes are normal to a surface of the mounting region.” Support for this claim is found in the specification at page 13, lines 7-9. New claim 41 includes the feature that the “central axes intersect at a point about one inch from the major surface” of the reflector. Support for this claim is found in the specification at page 13, lines 21-23.

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Each of new claims 39-41 ultimately depends on independent claim 9, which is allowable for at least the reasons previously described. Entry and allowance of the claims is respectfully requested.

Newly added independent claim 42 recites, in part, a light source structure in which a first light source is positioned along the central axis of a parabolic hole 1/4A from the bottom of the hole. Support for claim 42 is found in the specification at page 11, lines 11-14. In contrast to the claimed invention, Kamada places multiple LED chips 1 within each paraboloid 10b, only one of which is on the central axis of the paraboloid 10b. *See Figure 13.* However, this LED chip 1 is located at or on the surface of the substrate 10, not at a distance of 1/4 from the bottom of the paraboloid 10b. *See Figure 13.* Thus, Kamada fails to teach or suggest a light source structure according to the claimed invention. Allowance of claim 42 is respectfully requested.

CONCLUSION

All of the claims remaining in this application should now be seen to be in condition for allowance. The prompt issuance of a notice to that effect is respectfully solicited. If there are any remaining questions, the Examiner is requested to contact the undersigned at the number listed below.

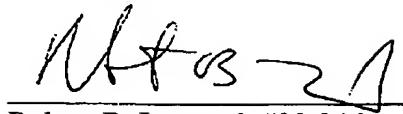
The fee for one independent claim not previously paid for is enclosed. Should any additional fee be required, the Commissioner is authorized to charge the required fee or credit any overpayment to the Faegre & Benson Deposit Account No. 06-0029 as necessary, and in such an event, is requested to notify us of the same.

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Respectfully Submitted,

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